



**PATIENT**

Lulu Castro

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Spayed Female

**AGE**

7 Years 8 Months

**WEIGHT**

9.15 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Kerri Becker

**HOSPITAL NAME**

Animal Paradise  
Hospital

**REFERRING VET**

Dr. Elshafie

**INVOICE**

73566

**DATE**

3/11/26

**PRESENTING CLINICAL SIGNS**

Further investigate the liver, recurrent gastroenteritis, r/o FB vs pancreatitis vs ibd vs food intolerance

Abnormal PE/Chem/CBC/UA Results: ALT-300

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal is size (3.54 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal is size (3.56 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**Adrenal Glands**

The right adrenal gland is mildly "plump" in size (0.78 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is enlarged with mild heterogenous parenchymal changes. Swollen capsular expansion is noted at the caudal pole (2.0 cm x 2.1 cm) without evident capsular escape or vascular invasion. Cranial pole measures 0.49 cm.

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen is mildly distended with primarily fluid as well as some echogenic non-shadowing luminal contents and gas consistent with



<b>PATIENT</b>	normal chyme. There is no evidence of obstruction, foreign material, or infiltrative disease. Pyloric outflow tract appears patent.
Lulu Castro	
<b>SPECIES</b>	The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.
Canine	
<b>BREED</b>	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
Chihuahua	
<b>SEX</b>	<b><i>Pancreas</i></b> The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.
Spayed Female	
<b>AGE</b>	<b><i>Free Abdomen</i></b> There is no visible free peritoneal effusion noted in these images.
7 Years 8 Months	
<b>WEIGHT</b>	There is no apparent pathologic lymphadenopathy noted in these images.
9.15 lbs	
<b>INTERPRETED BY</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
Beth Johnson, DVM DACVIM	<ul style="list-style-type: none"> <li>Bilateral medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.</li> <li>The adrenal gland changes, especially the enlarged caudal pole of the left adrenal gland/adrenal mass should be interpreted in combination with patient's clinical history, as differentials include emerging adrenal disease (either hyperplasia versus adenoma or even adenocarcinoma, pheochromocytoma, other) versus normal patient variant/incidentaloma.</li> <li>Otherwise, an obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, other reactive hepatopathy, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out.</li> </ul>
<b>IMAGING PERFORMED BY</b>	
Kerri Becker	
<b>HOSPITAL NAME</b>	
Animal Paradise Hospital	
<b>REFERRING VET</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
Dr. Elshafie	Given the adrenomegaly/adrenal mass, a blood pressure is recommended if not recently evaluated.
<b>INVOICE</b>	Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.
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<b>DATE</b>	Especially in the face of concurrent clinical signs associated with adrenal disease, hormone testing could be considered, beginning with a low-dose Dexamethasone suppression test.
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Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Having said that, adrenal disease is typically not associated with gastrointestinal history and/or even solely increased ALT without concurrent increased ALP. Therefore, additional potentially primary workup for concurrent hepatopathy and gastrointestinal disease may be indicated concurrently or even before.

Bile acids could be considered if patient's total bilirubin is not increased.

Testing for Leptospirosis could be considered.

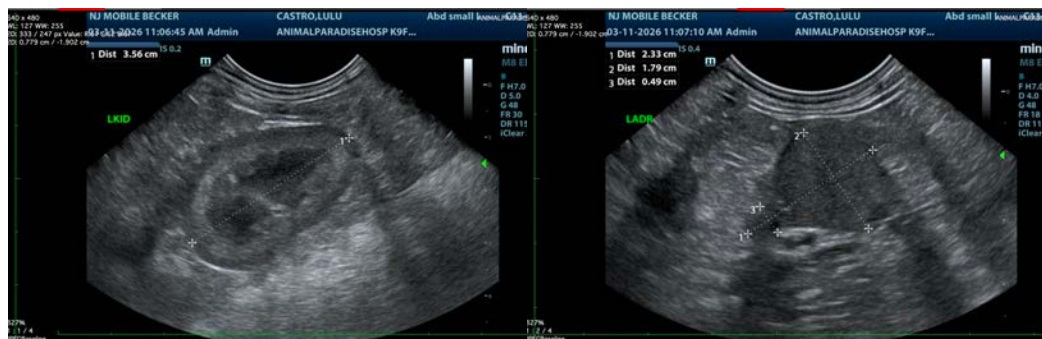
A routine fecal/giardia exam is recommended if not recently evaluated.

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

In the meantime:

- Supportive/symptomatic medical management of clinical signs is recommended, including anti-emetics, gastroprotectants (+/- sucralfate, especially with any history of hematemesis), an appetite stimulant and fluid therapy if indicated, etc.
- Additionally, empirical deworming with a 5-day course of Panacur is recommended.
- A full course of empirical Helicobacter triple therapy could be considered.
- A probiotic, such a visbiome or proviable, may be helpful.
- Finally, if tolerated, a transition in diet could be considered, based on trial-and-error response with some options to consider including a gastrointestinal biome diet vs a hydrolyzed protein diet (sometimes several trials with different brands are necessary) vs an easy to digest, bland or low-fat diet vs other.



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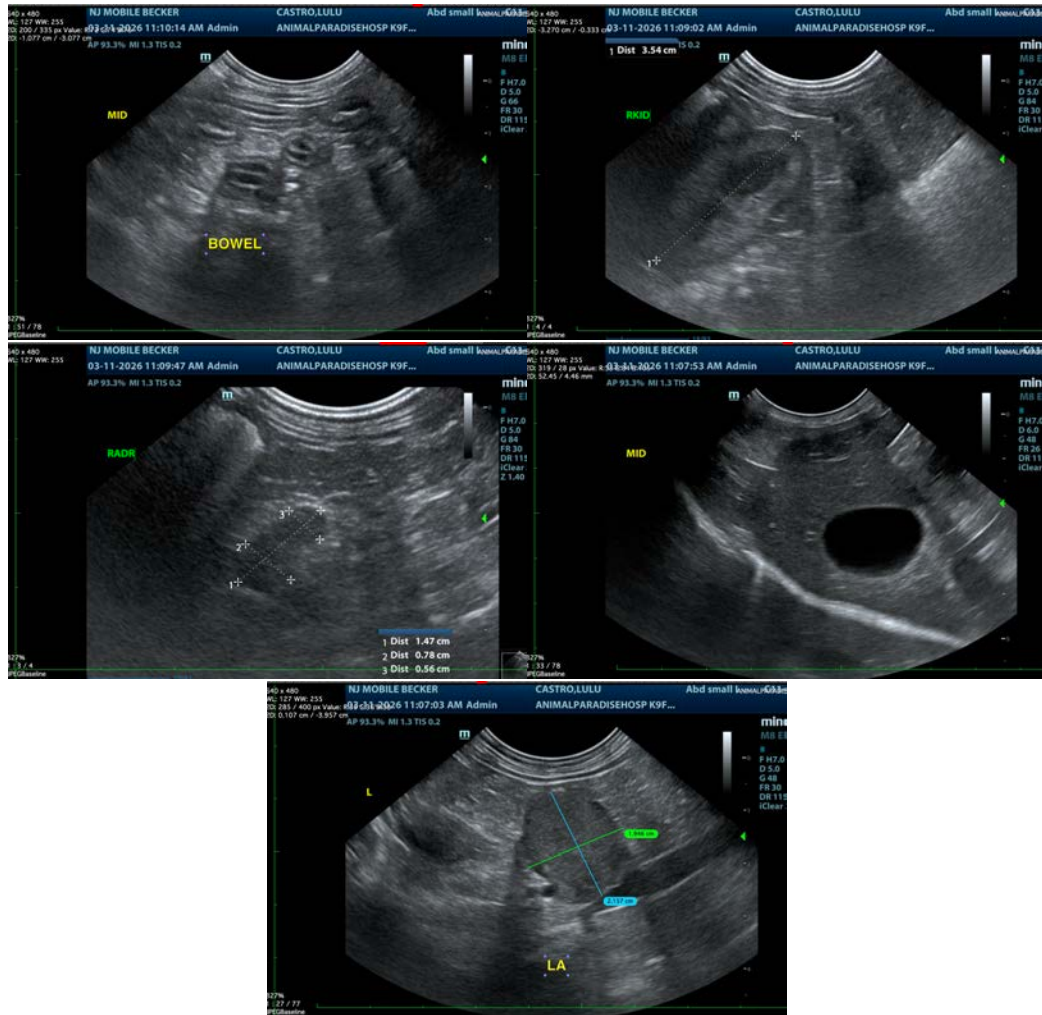
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Beth Johnson, DVM, DACVIM**  
 info@sonopath.com